



Department of Defense Installation Energy Program

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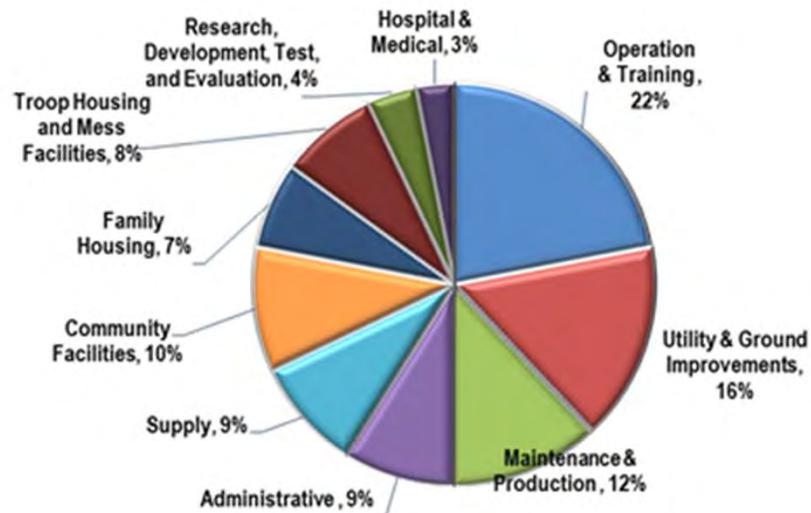




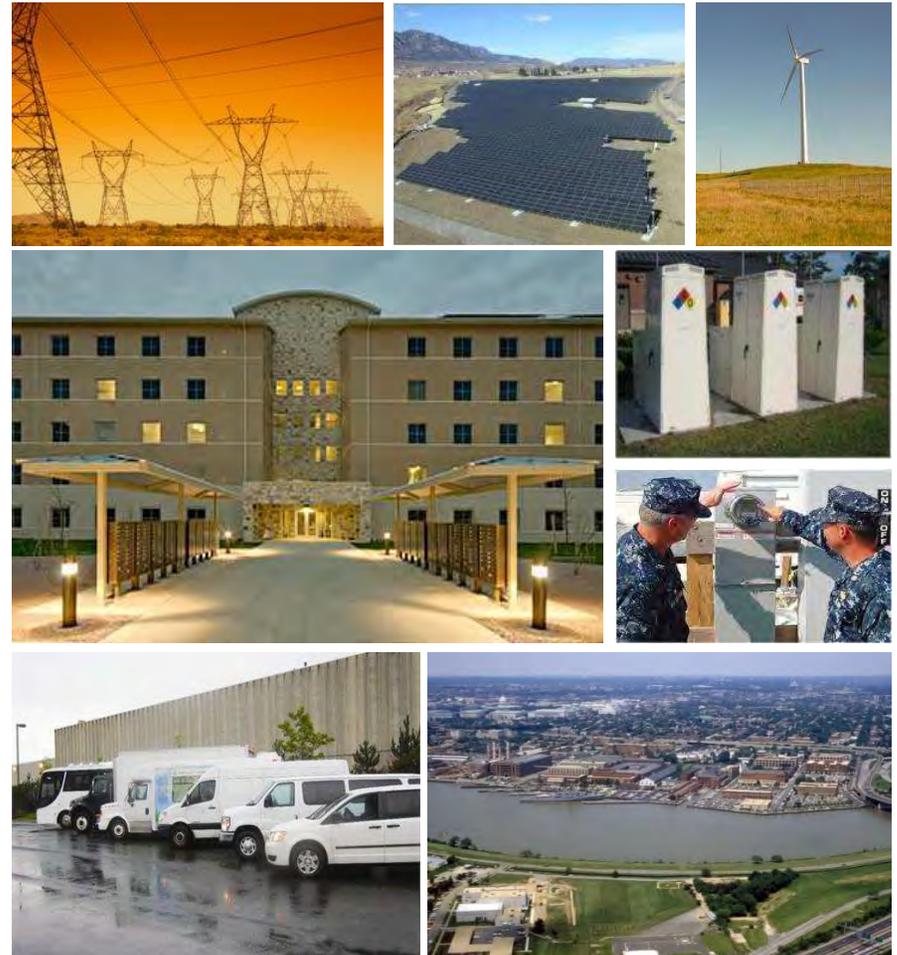
Installation Energy is Energy that Powers Our Military Installations

Acquisition, Technology and Logistics

DoD's Built Infrastructure



- ❑ Over 572,000 total assets
 - 275,000 buildings in over 2.2 billion square feet
- ❑ 160,000 non-tactical vehicles
- ❑ DoD's reliance on the commercial electricity grid places continuity of critical missions at risk
- ❑ \$4B annual energy cost is single largest base operating cost



DoD focus: Improve the energy resilience of our military bases and cybersecure our building systems to ensure mission readiness and assurance; Optimize installation energy and water performance to reduce base operating costs



DoD Installation Energy Priorities

Acquisition, Technology and Logistics

- **Energy resilience (ER)**
 - DoD Power Resilience Review (Dec '13 – Aug '14)
 - DoDI 4170.11 Installation Energy Management: ER requirements added (Mar '16)
 - MIT/LL Energy Resilience Business Case Analysis Study (Oct '16)
 - DoD Energy Resilience Operations, Maintenance and Testing Guidance (Mar' 17)
 - DoD Energy Resilience Planning Guidance (ECD TBD)
 - Alternative Financing Study (RFP issued)
 - For OSD ER efforts go to: http://www.acq.osd.mil/eie/IE/FEP_Energy_Resilience.html
- **Comprehensive installation energy planning**
 - DoD policy memo requiring Installation Energy Plans (Mar' 16)
 - Holistic plan for all energy requirements: ER, Energy Efficiency, Distributed Energy (e.g. RE)
 - Assessing energy actions for direct contribution to mission assurance
 - Includes financing strategy: appropriated and alternative financing requirements
- **Water conservation**
 - Industrial Agriculture Landscaping Water Guidance (Dec '15)
 - Water Use for Landscape Architecture on DoD Installations/Sites (Mar' 17)
 - UFC for Landscape Architecture (Under development)



DoD Installation Energy Priorities

Acquisition, Technology and Logistics

- **Cybersecuring Facility Related Control Systems (FRCS)**
 - DoD Policy Memo requires Components to Cybersecure FRCS (Mar '16)
 - Inventory and prioritize critical mission FRCS, establish resourcing requirements and implementation plans
 - FRCS Cyber UFC (Sep '16)
 - FRCS Cyber Manual (in development)
 - DFARs rule to ensure newly procured FRCS meet cyber requirements (in development)
- **Overcoming Project Financing Challenges**
 - Limited appropriated funds: SRM, ERCIP, MilCon
 - Prioritizing projects to provide power to critical military functions during power disruptions
 - Making the business case for alternative financing
 - ESPC/UESC/UP contracts/Power Purchase Agreements
 - Ensure projects provide access to reliable power to critical missions
 - Understand the long term financial risks to DoD
 - Identify best practices and lessons learned to improve contracts
 - Better defining requirements (right sizing)
 - Incorporating performance metrics (accountability)
 - Post award monitoring (M&V)

ESTCP – Energy and Water Technology Testbed

- Feb 2017 - ESTCP issued a solicitation for technology demonstrations integrated with UESCs
- Objective: Accelerate deployment of proven technologies in DoD facilities
 - Utilities/ESCOs gain experience with new technology.
 - Projects developed/implemented using UESC process provides direct example for future UESC applications.
- Additional benefits:
 - Continued operations of Installed technology.
 - Efficient project execution - Increase performance and cost data collection.

ESTCP – Energy and Water Technology Testbed

Solicitation update:

- Lots of interest
- 4 projects selected for funding
 - 2 integrated with UESC projects, 2 coordinated with utility partners
- Options proposed for project integration, but specific approach TBD.
- FY19 solicitation scheduled for early January, 2018
 - Plan to include similar UESC-related topic.
 - www.SERDP-ESTCP.org – sign up for mailing list